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Wetlands to Farmlands: Curbing the Conversion

Fewer U.S. Farms page 9

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PERSPECTIVES

GATT TALKS ARE OFF TO A GOOD START, but don't expect immediate results. It's going to be a long, rough road ahead.

In late September, representatives of most of the major trading nations sat down in Punta del Este, Uruguay, agreeing to put export subsidies for farm products on the agenda of new negotiations just getting started in Geneva, Switzerland. But U.S. officials heaving a sigh of relief at this development are taking a deep breath as well in anticipation of talks that are scheduled to last as long as 4 years. Any agreements reached probably won't become effective until talks are concluded.

The preliminary Uruguay meeting set forth several general goals in regard to the agricultural agenda to be discussed in Geneva. Trade negotiators agreed to work toward liberalizing farm trade by improving market access, discouraging the use of subsidies and other measures impeding agricultural trade, and bringing agriculture more under the guidelines of the General Agreement on Tariffs and Trade (GATT), which sets the ground rules for world trade.

From the U.S. perspective, those goals could be met by curbing export subsidies and nontariff barriers to trade like volume import restrictions, licensing requirements, and health and safety rules. Some subsidies, say U.S. officials, constitute unfair competition and have been used by others to capture ever-greater shares of world export markets.

EC ministers counter that U.S. deficiency payments to farmers also subsidize U.S. farm exports.

"What this means is that all forms of government assistance to agriculture could be on the negotiating table," says economist Nicole Ballenger of USDA's Economic Research Service. And that is certain to worry some farm commodity groups in the United States. A recent study by the World Bank indicates that several U.S. commodities—such as coarse grains and ruminant meats—would benefit from lower levels of global protectionism, while other commodities, such as dairy and sugar, would suffer.

These issues are sure to be complicated by the concerns of developing countries, who want open access to the markets of the industrialized nations. Many of these countries have enjoyed preferential treatment for many of their exports, for example, and would be unwilling to lose this special status. The U.S. position is that some of these countries, at least, should be "graduated" to being treated as regular members of GATT.

Since its founding in 1947, GATT has provided the framework for world trade and has been a forum for resolving trade disputes among major trading nations. Currently, 92 nations belong to GATT, and another 30 countries observe its provisions. Together, they account for about four-fifths of world trade.

The United States has other interests, of course, in the GATT talks. In fact, agriculture is only one of a dozen other trade topics to be debated. In the current talks, services as well as agriculture are likely to be the most combative issues. U.S. officials are expected to make a concerted effort to broaden GATT trade rules to include the burgeoning field of services, such as financial, insurance, legal, maritime, and construction services. U.S. multinational firms are far ahead of most other nations in providing these services to the world. But many developing countries are highly protective of their emerging service industries and may be reluctant to expose them to international competition under GATT's guidelines.

The general objective of GATT is to lower barriers to world trade, but agriculture has been exempted from many of GATT's trade rules, and services have only recently become a significant trade issue.

FARMLINE

AGRICULTURE . . . NATURAL RESOURCES . . . RURAL DEVELOPMENT
Practical economic intelligence from USDA's Economic Research Service

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"Swampbusting"—converting wetlands for farming—once seemed like the best thing to do with swamps and marshes. But the thinking has changed, and that's why the 1985 farm bill carries a built-in penalty for swampbusters.

Where the Export Decline Hits Hardest *by Doug Martinez* 6

The sharp downturn in U.S. agricultural exports has had ripple effects in the farming communities that depend on sales of "export-oriented" crops. A recent study identifies 420 export-dependent rural counties, with the heaviest concentrations in the Delta and Corn Belt.

Why Labor Gets More of the Food Dollar Than Farmers *by Eric Van Chantfort* 12

The cost of labor to transform farm commodities into consumer-ready foods is taking an increasing share of the food dollar, while the share going back to farmers is declining. The reasons can be found on the farm, in the food factories, and on today's menu.

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Wetlands to Farmlands: Curbing the Conversion

Some people think of swamps and marshes as dark, forbidding places teeming with mosquitos, snakes, and possibly alligators. Others think of them as excellent locations for fishing, hunting, and boating.

According to economists Ralph Heimlich and Linda Langner of USDA's Economic Research Service, there's more to America's wetlands—lowland areas filled with moisture—than either image might suggest. The economists note that wetlands are a valuable natural resource—a fact that goes a long way in explaining the new "swampbuster" provision in the 1985 farm bill (Food Security Act).

In past decades, millions of acres of swamps and marshes have been drained for agricultural conversion and other purposes. Heimlich and Langner estimate that U.S. wetlands now cover about 99 million acres, down from somewhere between 127 and 215 million acres in the 1800's.

"Swampbusting—converting wetlands for farming—began before the turn of the century. Only recently has it come to be viewed as harmful to the environment," explains Heimlich. "Historically, swamps and marshes have been thought of negatively, as land that had to be reclaimed and made productive."

Langner says that early government programs led to swampbusting. Federal surveys prior to 1948 focused on areas where swamps and marshes were drained for reasons of public health and agricultural development. Direct government assistance for agricultural conversion was available until 1978.

But the thinking has changed, and so have the laws. The farm bill stipulates that farmers who swampbust will lose their eligibility for farm program benefits, including USDA price support programs, disaster payments, crop insurance, Farmers Home Administration loans, Commodity Credit Corporation storage payments, and farm storage facility loans.

"The availability of farm program benefits conflicted with other government policies that encouraged wetlands conservation," Langner says. "The new provisions are designed to make the policies consistent."

Value of Wetlands

Wetlands serve a variety of economic and ecological purposes. According to the Soil Conservation Society of America, a nonprofit organization that promotes conservation of land and water resources, wetlands can reduce the risk of flooding. They store water during periods of high stream and river flow and release it back gradually.

Swamps and marshes also improve water quality because they trap sediment, sewage, and pollutants. This ability to absorb water also enables wetlands to help stabilize shorelines against erosion and storm damage.

Wetlands provide another important benefit: They're home for a multitude of plants and animals. Approximately two-thirds of all commercial fish—including bluefish and striped bass—spawn in estuaries and marshes.

Freshwater wetlands are critical feeding, spawning, and nursery grounds for bass, northern pike, and perch. Saltwater marshes are home for 15 leading commercial fish and shellfish such as crabs, shrimp, and oysters.

The new swampbuster sanctions may be more effective in upper Midwestern states where government payments are a larger percentage of net farm income.

At least 50 fur-bearing animals such as muskrat and mink live in swamps and marshes. But waterfowl are most closely associated with them. Ducks and geese depend on northern wetlands as their main breeding grounds.

Where there's marsh, there's also economic value. The 1980 harvest value of animal hides trapped in wetlands totaled about $94 million. The value of the saltwater fish catch that same year was about $1 billion.

Of America's 78 Million Acres of Privately Owned Wetlands, 5.1 Million Acres Have a High or Medium Potential for Agricultural Conversion*

*Excludes Alaska, Hawaii, and the District of Columbia.
Source: USDA Soil Conservation Service, 1982 Natural Resources Inventory

In past decades, millions of acres of swamps and marshes have been drained for agricultural conversion. New farm bill provisions are designed to discourage this.

According to the economists, swampbusting threatens wildlife areas in Florida, North Carolina, some upper Midwestern states including Nebraska and North Dakota, and lower Mississippi River states such as Arkansas, Mississippi, and Louisiana.

Converting Wetlands for Farming

Farmers generally convert their land when revenue or anticipated revenue from expanded crop production means increased profit. Heimlich and Langner estimate that about 43 million acres of the remaining 99 million acres of U.S. wetlands (78 million acres are privately owned) could be farmed if drained. Of that total, about 5.1 million acres have a high or medium potential for conversion, according to USDA's Soil Conservation Service.

"Economic conditions, to some extent, have reduced the amount of wetlands being drained in recent years," says Langner. "But this is a short-term condition. In the long run, there is still the potential for increased swampbusting."

Whether or not farmers will drain more wetlands is an unanswered question, suggest the analysts. They note that drainage will probably continue for such purposes as timber harvesting, stream channelization, and removing isolated swamps or marshlands from farmland already in production.

But conversion costs vary widely, depending on the type of wetland owned. Costs can range from less than $20 an acre for farmers using their own equipment in parts of the upper Midwest to more than $200 an acre in some North Carolina marshlands.

According to Heimlich, swamps and marshes located in upland areas are the type most frequently drained for farming. He estimates that about 14-22 million acres of wetlands—if converted for farming and enrolled in price support programs—could have given positive returns above operating and conversion costs in 1985.

The new swampbuster provisions affect the economics of conversion only for the farms and commodities that qualify for government programs. Participation in these programs varies widely from region to region. The economists predict that swampbuster sanctions will be more effective in upper Midwestern states, like Nebraska and North Dakota, where government payments are a larger percentage of net farm income.

High conversion costs and changes in the tax code will likely be greater obstacles to future wetlands drainage, Heimlich says. Until recently, federal income tax law allowed an operator to deduct up to $5,000 from net farm income for land-clearing expenses, and up to $25,000 of gross farm income for soil and conservation expenses. Other expenses could be deducted as depreciation allowances, and favorable capital gains treatment was available when converted wetlands were sold.

The new tax reform legislation eliminates these deductions for farm investments, including the incentives that have encouraged the conversion of wetlands.

The economists suggest, however, that agricultural conversion will remain a potential threat to U.S. wetlands. And future budget concerns could limit the government's direct role in protecting them through such efforts as USDA's Water Bank Program and the Interior Department's Easement and Purchasing Program.

"Denying farm program benefits for wetlands conversion and reduced tax incentives will help preserve our wetlands for the time being," say the economists. "But these actions may be less effective if commodity prices rise significantly in the future." □

[Based on information supplied by economists Ralph Heimlich and Linda Langner of the Natural Resource Economics Division, Economic Research Service.]

For More Info

A recent report by economists Ralph Heimlich and Linda Langner deals extensively with the potential for wetlands conversion and the impact of the swampbuster provision. Copies of ***Swampbusting: Wetland Conversion and Farm Programs*** can be purchased for $2.00 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Ask for the report by title and stock number: 001-019-00459-2. For faster service, call the Government Printing Office order desk at (202) 783-3238.

Where the Export Decline Hits Hardest

The sharp downturn in U.S. agricultural exports since 1981 has probably had the most negative impact on farming communities in the Delta and Corn Belt states, where large numbers of counties produce crops for foreign markets.

"These are the regions most vulnerable to the decreased demand for U.S. farm exports," says economist Judith Sommer of USDA's Economic Research Service. "More than 40 percent of the nonmetro counties in each region received at least half of their value of farm sales from export-oriented commodities."

The Delta states consist of Arkansas, Louisiana, and Mississippi. The Corn Belt includes Illinois, Indiana, Iowa, Missouri, and Ohio.

The number of farming communities dependent on export crops is somewhat smaller, but still very significant, in the Northern Plains (North Dakota, South Dakota, Nebraska, and Kansas) and Southern Plains (Oklahoma and Texas).

Across the nation, says Sommer, there were 420 counties in 1982 (one of every six nonmetropolitan counties) in which 50 percent or more of total farm sales came from just five "export-oriented" crops—corn, wheat, soybeans, cotton, and rice. Although each of these commodities also has a sizable domestic market, exports play a major role in determining overall demand and U.S. farm prices. "Therefore, such counties," she says, "can usually be considered export-dependent."

The impact, and implications, of belonging to this group reach beyond the individual farm family to the rest of the rural community—from the farm implement businesses on Main Street to the local banks carrying loans for producers hurt by falling exports.

Ripple Effect

The ripple effect is particularly pronounced when the county's livelihood depends heavily on the export-oriented farms.

"When farmers are in trouble, there's not much else to fall back on in many of these areas," says Sommer. "The community's entire economy may be based on farm commodities with erratic or depressed sales, and farmers don't really have other nonfarm alternatives. In these places, the nonfarm businesses count the troubled farmers as their largest and most important customers."

Across the nation, 420 counties received 50 percent or more of total farm sales from just five "export-oriented" crops.

That's true, for instance, in Quitman County, Mississippi, where nearly 100 percent of farm sales are from export-oriented crops (primarily cotton and soybeans).

For other export-dependent counties, especially those located near larger towns and cities, the fall in farmers' income may be cushioned by the off-farm employment of its residents.

An example is Grundy County, Illinois. Sales of corn and soybeans accounted for 90 percent of farm sales in 1982. But Grundy County is located on the fringe of the Chicago metropolitan area, and roughly a third of its workers are employed in manufacturing jobs.

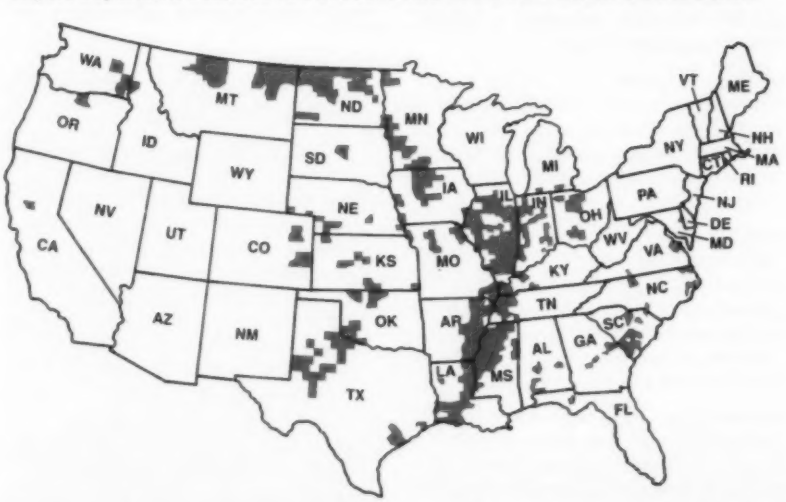
Of course, weak demand and prices for farm commodities hurt all growers, not just those in remote rural areas or in counties classified as export-dependent.

Sommer, however, is focusing on areas where the concentration of highly vulnerable farms tends to magnify the impact. "When so many farmers in one area are producing export-oriented crops, a lot of them will be hurt, and that will have a negative, multiplier effect on their community," she says.

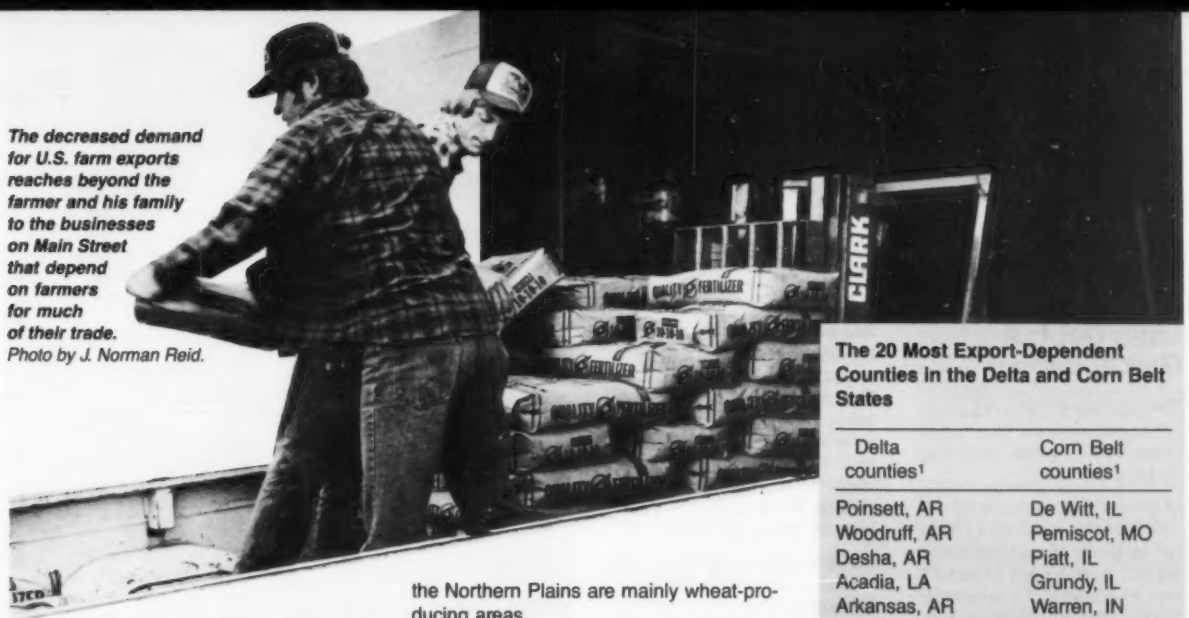
Delta Most Dependent

Clearly, she adds, "the Delta region has been the most dependent on sales of the five export-oriented commodities." More than half, 51.8 percent or $2.9 billion, of farm sales in nonmetro Delta counties in 1982 were derived from soybeans, cotton, rice, and, to a much lesser extent, corn and wheat.

Export-Dependent Counties Are Concentrated in the Corn Belt and Delta States*



*Counties were classified as export-dependent when 50 percent or more of their farm sales in 1982 consisted of "export-oriented" crops—corn, soybeans, wheat, cotton, and rice.



The decreased demand for U.S. farm exports reaches beyond the farmer and his family to the businesses on Main Street that depend on farmers for much of their trade.
Photo by J. Norman Reid.

Although the Delta region was the most dependent on farm exports in percentage terms, the dollar sales of export-oriented commodities in the Corn Belt were actually more than three and one-half times as great. Nonmetro counties in the Corn Belt generated $10.8 billion, or 47.8 percent of total farm sales, from production of the five commodities (primarily corn and soybeans).

The Northern Plains ranked second among U.S. farm production regions in dollar value of export-oriented commodities, marketing more than $5 billion of corn, wheat, and soybeans—or 30 percent of its total farm sales value—in 1982.

The smaller clusters of export-dependent counties in the Southern Plains states grow primarily cotton and wheat, while those in the Northern Plains are mainly wheat-producing areas.

In 1982, she goes on to say, the 420 export-dependent counties sold $20.4 billion of farm products. Of that amount, $13.8 billion consisted of sales of the five export-oriented crops.

U.S. export volume of grains and cotton is expected to rise significantly in the year ahead, but Sommer isn't sure whether the impact will be felt by farming communities in export-dependent regions.

Volume increases could be offset by lower prices, according to trade analysts. They predict that a sustained recovery in export sales may still be a year or two away. □

[Based primarily on information provided by Judith Sommer of the Agriculture and Rural Economics Division, Economic Research Service.]

The 20 Most Export-Dependent Counties in the Delta and Corn Belt States

Delta counties[1]	Corn Belt counties[1]
Poinsett, AR	De Witt, IL
Woodruff, AR	Pemiscot, MO
Desha, AR	Piatt, IL
Acadia, LA	Grundy, IL
Arkansas, AR	Warren, IN
Cross, AR	Gallatin, IL
Ashley, AR	Lawrence, IL
Quitman, MS	Vermilion, IL
Jefferson Davis, LA	Benton, IN
Monroe, AR	Christian, IL
St. Francis, AR	Coles, IL
Vermillion, LA	Mason, IL
East Carroll, LA	Douglas, IL
Jackson, AR	Ford, IL
Lee, AR	Alexander, IL
Coahoma, MS	Logan, IL
Phillips, AR	Butler, MO
Tensas, LA	Newton, IN
Madison, LA	Stark, IL
Leflore, MS	Edgar, IL

[1]Based on Census of Agriculture data, Delta counties were estimated to be more export-dependent than Corn Belt counties, largely because the livestock sector is more important in the Corn Belt than the Delta.

Big Five Export Crops

Although U.S. farm exports doubled in value from 1975 to 1981—increasing from $22 billion to $44 billion—export sales of farm commodities had fallen nearly 30 percent from their 1981 high by the end of 1985, says USDA economist Judith Sommer.

Farm communities dependent on sales of corn, wheat, soybeans, cotton, and rice know what this means.

"Together, these five commodities accounted for 53 percent of the growth in U.S. farm trade from 1975 to 1981 and 76 percent of the subsequent decline," Sommer says.

In the peak year of 1981, these five export-oriented crops comprised 59 percent of U.S. farm exports. They made up more than half of U.S. farm exports in 1985, albeit of a much smaller volume.

The importance of international sales from the five farm products is demonstrated by the significant share of U.S. production sold in world markets.

Sommer points out that in the last 5 marketing years, an average of 54 percent of U.S. wheat production was marketed abroad. During the same marketing years, 26 percent of U.S. corn production was exported, 40 percent of soybeans, 47 percent of cotton, and 49 percent of rice.

U.S. exports also contributed heavily to total world trade in these commodities. In the marketing years from 1981 to 1985, U.S. wheat exports, on average, made up 36 percent of world wheat exports. The percentages for the other crops were: corn, 72 percent; soybeans, 52 percent; cotton, 28 percent; and rice, 18 percent.

"These figures suggest the impact that changes in international trade may have on U.S. producers of these commodities, their communities, and even large geographic regions," says Sommer.

AGRICULTURAL ROUNDUP

Latin Debt: A Global Impact

The large foreign debts of Latin American nations are likely to pose problems in the global community for years to come.

"It is already apparent that Latin debt difficulties represent a problem not just for the international banks, but for the entire world economy," says economist Elaine Grigsby of USDA's Economic Research Service.

For the United States, the most immediate impact has been the continuing falloff in U.S. exports to Latin nations, according to Grigsby and her colleague, economist Emilio Pagoulatos of the University of Nebraska.

Latin countries were a rapidly growing export market for U.S. agriculture during the 1970's, but this trend has been reversed. The total value of U.S. agricultural exports to Latin America was 33 percent lower in fiscal 1985 than in fiscal 1981. That decline roughly matched the overall drop in U.S. farm sales abroad during the same time span.

Recent estimates indicate that U.S. sales to the region may have fallen another 20 percent or so in fiscal 1986, which just ended on September 30. That may exceed the percentage decline in total U.S. farm exports to all markets for 1986.

U.S. farm sales to the region could be hurt even more if growth in Latin economies continues to slow or stagnate. Ultimately, Latin debtor nations could experience severe declines in standards of living and further isolation from world trading channels.

"Resolution of this debt crisis will require sustained efforts over a substantial period of time," says Grigsby.

Of the world's 15 major debtor nations, 10 are Latin American.

And the four largest debtors among the developing countries are Latin as well: Brazil owes $107 billion, Mexico $99 billion, Argentina $50 billion, and Venezuela $33 billion. Several of these countries have been forced by economic circumstance to defer payment of principal and to reschedule their loans at more lenient terms.

Certainly, says Grigsby, some progress has been made in dealing with the debt.

"Unlike the 1930's, when many Latin nations defaulted on their debt payments, most of these countries have made efforts to service their debt," she notes.

Another difference, though, is that the debts of the 1980's are intricately linked to a more integrated world economy, where the consequences of default would not be limited to the Latin debtors.

For Latin nations, this growing global connection meant ready access to capital markets and very high growth rates during the 1970's. That ended in the early 1980's when several economic shocks rippled through financial markets. Chief among them were restrictive monetary policies in the industrialized nations and the prolonged world recession following a major oil price increase in 1979-80.

"That led to a sharp decline in world demand for the exports of the developing countries," says Grigsby, "as well as increased protectionism in industrialized countries and a drop in the real prices of commodities that many developing countries export."

The oil price shock at the end of the decade was followed by a sharp jump in real interest rates and a surge in "capital flight" from Latin countries.

"Finally, some responsibility for the debt crisis rests with the commercial banks in industrialized countries," says Grigsby. "Some of the excessive borrowing by the developing countries in the 1970's appears to have been abetted by the banks' competition for loans. Also, since 1982, the international debt problem has been aggravated by the withdrawal of banks from international lending."

The world community—notably through the International Monetary Fund (IMF)—has responded to the crisis by rescheduling payment of debt owed to commercial banks by Latin American governments. Such debt includes private-sector debt guaranteed by the governments of Latin countries.

"The debtor countries have had to adopt austerity measures to meet IMF loan conditions," Grigsby says. These measures have included real currency devaluations, wage controls, and import restrictions.

Latin countries have had some success in making these adjustments to improve their trade balances, but reductions in food and capital goods imports have had some adverse effects.

"The standard of living has fallen because of reductions in income, and productive capacity has been reduced by a fall in gross capital formation," Grigsby says.

She adds that fiscal austerity measures, combined with other economic stabilization policies and the decrease in savings, have also put pressure on Latin America by reducing the growth of real output and impairing growth prospects.

Moreover, "the recent decline in oil prices has served as a reminder of the continuing weak financial position of several Latin American oil exporters and their vulnerability to adverse external conditions," she says.

"These developments underscore the fragility and the contradictions of the adjustment process in Latin America. The remarkable improvement of Latin American trade balances enables these countries to earn the foreign exchange to make some payments on their foreign debt in the short run. However, if domestic investment is reduced, this may impair their ability to pay their debt in the future."

"It seems unrealistic," Grigsby says, "to expect domestic economic growth in Latin nations while they are expected to cut imports (often machinery and other capital goods needed to improve productivity), increase exports, cut fiscal deficits, and make interest payments at the same time."

Sharper Drop In Farm Numbers

The number of American farms declined by 60,310 units between 1985 and 1986, according to USDA's latest estimate. This would represent the largest 1-year decline in farm numbers in more than a decade, reports statistician Van Johnson of USDA's National Agricultural Statistics Service.

The nation's farm count now stands at slightly above 2.2 million. Last year's number was closer to 2.3 million farms, and that was down from around 2.4 million in 1980 and more than 2.5 million in 1975.

Johnson also notes that the amount of land in farms dropped by roughly 7 million acres from 1985 to 1986, while average farm size increased to a record 455 acres, up from 446 acres last year. Average farm size continues to grow because much of the land released by farmers leaving the business is absorbed into other operations. As a result, the acreage in farming is declining at a slower rate than farm numbers.

In the late 1970's and early 1980's, it appeared that farm numbers might actually be leveling off after falling every year since the mid-1930's (numbers peaked at more than 6.8 million farms in 1935). In 1980 and 1981, two small increases in farm numbers were reported.

Then numbers turned down again, and the declines have accelerated in the last few years. The 2.7-percent drop from 1985 to 1986 was preceded by declines of 2.3 percent from 1984 to 1985, 1.8 percent from 1983 to 1984, and 1.3 percent from 1982 to 1983. Farm numbers dropped less than 1 percent a year on average from 1975 to 1980.

Economist Donn Reimund of the Economic Research Service suggests that the larger declines of late probably reflect the troubled financial conditions in agriculture.

"We saw large declines in the 1950's and 1960's," he says, "but that was a different situation. Then, we were going through a technological adjustment as a new generation of machinery reduced the labor requirements for farming and generated a big demand for farmland expansion. Farmers willing to quit could sell at a pretty good profit."

Today, he says, many of the farmers are leaving the business as debtors. Some are being forced out because they don't have the cash

Farm Numbers Dropped an Estimated 2.7% to 2.2 Million This Year

	Number of farms[1]	Percent change[2]
1976	2,497,270	−1.0%
1977	2,455,830	−1.7%
1978	2,436,250	−0.8%
1979	2,432,300	−0.2%
1980	2,432,510	+0.01%
1981	2,433,920	+0.1%
1982	2,400,550	−1.4%
1983	2,370,200	−1.3%
1984	2,328,400	−1.8%
1985	2,274,730	−2.3%
1986[3]	2,214,420	−2.7%

Source: National Agricultural Statistics Service.
[1]A farm is defined as a place that sells or could sell $1,000 or more of ag products during the year. [2]Percentage change from previous year. [3]Estimate.

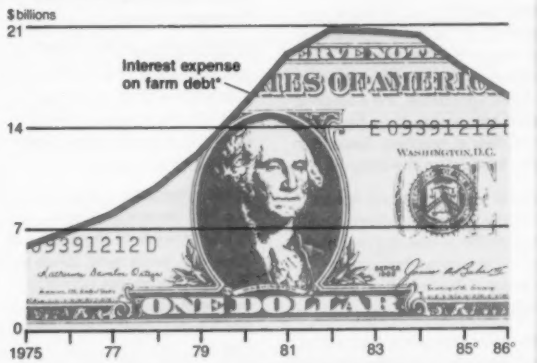
Gleanings

Farmers' expenses for interest on farm debt finally seem to be moving in a firm downward direction, observes economist Greg Hanson of the Economic Research Service. The farm sector's total interest expenses climbed from around $6.1 billion in 1975 to a peak of $21 billion in 1982 as interest rates rose and farmers took on additional billions of dollars of indebtedness to expand and upgrade their operations. The first significant drop in the interest bill came last year, Hanson says. Interest expenses declined an estimated 10% from 1984's $20.3 billion. He and other ERS analysts expect a further drop of 10%-13% this year.

. . . Hanson lists several reasons why these expenses are now easing off. Interest rates are down from the highs of the early 1980's, and farmers are reducing their overall debt burdens because of the threat that large debts have posed to farm profitability and survival. In addition, bankers are extending less credit and have written off substantial amounts of bad debt.

. . . the downward trend in interest payments (along with reduced expenses for fertilizer, fuel, and land) should help prop up future farm incomes, Hanson suggests. Spiraling interest expenses took a big bite out of net farm income during the last few years. From 1975 to 1979, farmers' interest expenses averaged $8.7 billion a year. In the first 5 years of the 1980's, the average was $19.3 billion. In other words, the sharp runup in interest expenses between the late 1970's and early 1980's slashed net farm income by an average of $10.6 billion a year. That's equivalent to more than one-third of total net farm income in 5 of the last 6 years. "The decline in interest expenses," concludes Hanson, "is a sign that much of the financial adjustment necessary to set the stage for recovery is now occurring."

The Farm Sector's Annual Interest Expenses Are Now Declining



*Excludes interest on farm household debt. *1985 estimated; 1986 projected.

reserves and can't get the refinancing to cover their current expenses and debt payments.

Reimund adds that the latest declines are heavily concentrated among farms with annual sales of $40,000 to $100,000. Such farms, he contends, are often too small to earn sufficient income from agriculture, but too large to operate on a part-time basis while the owner or manager holds an off-farm job.

Although most analysts agree that the present farm crisis is at least partly responsible for the accelerated drop in farm numbers, the recent declines have generally hit hardest outside the midwestern farm belt.

From 1985 to 1986, farm numbers fell in 36 states, held steady in 13, and increased only in Arizona, says statistician Van Johnson. Six states registered a combined loss of 33,000 farms, more than half of the total decline in U.S. farm numbers. Four of the six are along the nation's southern tier.

The greatest single decline was in Texas, where the number of farms dropped to an estimated 160,000, down 17,000 from 1985.

"The farm economy here is suffering just like it is in other parts of the country," says chief statistician Dennis Findley of the Texas Agricultural Statistics Service in Austin. He suggests, however, that the Texas showing may reflect a "catching up" with the agricultural depression in other areas. "Because of the diversified nature of Texas agriculture, the economic impact may simply have been a little slower in reaching Texas than it was in reaching the Midwest."

He also notes that some Texas farmers and ranchers have an additional problem: losses in revenues from oil leases on their land because of depressed oil and gas prices.

After Texas, the second largest decline in farm numbers occurred in Virginia, which lost 4,000 farms from 1985's 54,000. Declines of 3,000 farms were recorded in four states: Arkansas, which now has an estimated 50,000 farms; Illinois, with 87,000 farms; Minnesota, with 93,000 farms; and North Carolina, with 73,000 farms.

Where will farm numbers go from here?

"The biggest year-to-year declines may have already occurred," speculates economist Reimund. "In any case, the magnitude of the declines is likely to ease as the earning capacity of the land starts to buttress farmland values."

Reimund maintains that it is probably impossible to determine how much of the drop in farm numbers is related to financial stress and how much reflects the continuation of long-term structural change in U.S. agriculture.

"The trend toward fewer and larger farms has been going on for 50 years, and it will probably continue even when demand and prices in the farm sector improve," he says.

Three Crops May Be Better Than One

It may be time for some farmers to turn back the clock and reconsider the advantages of diversification, according to economist Michael Salassi of USDA's Economic Research Service.

Producing three or four commodities in place of one or two will not guarantee a profit, says Salassi, "but it is one method of reducing price risk in an uncertain economic environment."

Mixed-enterprise agriculture—a mix of crops, livestock, or both—used to be the norm for the traditional American family farm. Since World War II, however, the typical farm has been gradually transformed into a highly specialized production unit.

Specialization has its place, Salassi admits. It's an efficient way to concentrate the resources of the farm and its manager on one or two commodities for maximum volume and productivity.

Farmers' growing dependence on expensive machinery and the strong emphasis on maximizing output fostered specialization in the last few decades. At the same time, improved fertilizers and pesticides reduced the need for crop rotations, while new disease-fighting antibiotics helped open the door to specialized, large-scale animal agriculture.

There was also the relative security of rising government price supports as the mixed-enterprise midwestern farms of the 1940's and 1950's turned into the highly specialized corn-soybean operations of the 1970's and 1980's.

Many of these operations continue to thrive, but others have found that specialized agriculture and today's economic uncertainties don't mix. Increased variability in domestic and world prices, along with current policies to gradually reduce government price support levels, can expose the highly specialized producer to considerable price risk, Salassi says.

Analysts expect to see farmers experimenting with many different management strategies to cope with the increased risks. One of the strategies that can work for some farmers is diversification.

"If properly planned, diversification can help stabilize farm income and reduce the danger that a period of low prices for one commodity will threaten the survival of the entire farm business," Salassi says.

He tested these claims with a computer-simulated study matching Mississippi Delta farms producing cotton, rice, and soybeans with comparable—but less diversified—farms producing only rice and soybeans. He found that, over a projected 5-year period, the more diversified farms had higher average receipts, net cash incomes, and appreciation in net worth than the more specialized farms.

"Many of the factors that determine how profitably a farm operates are outside the farm manager's control," says Salassi. "One factor that the manager can control is diversification, which also appears to increase the chances of remaining financially viable."

In developing a diversification strategy and choosing a new crop or livestock enterprise to add to an existing operation, Salassi offers some common sense guidelines:

- Select commodities that have different price patterns. Two crops may be no better than one if the prices for both plunge together because both are tied to the same basic market fundamentals. A good combination may require a study of past price trends to choose the crop or crop-livestock mix that offers the best chance of protecting farm income over time.

- To the extent possible, new enterprises should complement existing enterprises. For example, a new crop that can be produced with existing, easily borrowed, or inexpensively leased equipment may be a better alternative than a crop that requires expensive, specialized equipment. Similarly, resource use will be more efficient and conflicts can be avoided by choosing alternative commodities with labor requirements that are not concentrated in the same peak months of the year when current enterprises require the most attention.

- Before departing from the commodities already produced in your part of the country, evaluate the marketing outlets available and your own entrepreneurial skills. The financial position of a farm business probably won't be strengthened by adding an enterprise that requires special production and marketing practices about which the farm manager and workers have little or no knowledge.

REPORTS IN THE NEWS

State Ag Statistics

Agriculture plays an important but very different role in each of the 50 states.

A recent bulletin published by USDA's Economic Research Service provides a state-by-state statistical guide. It can be a handy reference tool if you're looking for information on a specific state's agriculture or making comparisons among states.

For each state, the report shows the number of farms, farmland acreage, the average age of farmers, major commodities produced, cash receipts and expenses, farm income, government payments to farmers, farm debts and assets, and a significant amount of related data.

The bulletin can provide answers to hundreds of questions, such as:

- Which state has the most farms, and which has the fewest?
- Which states have 90 percent or more of their land area defined as farmland?
- It's no surprise that Georgia is the top state in peanuts, Washington in apples, Florida in oranges, Texas in cattle, and Iowa in corn, hogs, and soybeans. But which state is the nation's largest producer of both broilers and rice (as measured by 1984 cash receipts)? Which state leads in both turkeys and tobacco? Which state in both barley and sunflowers? And which in cranberries?
- In which state is the average age of farmers the oldest? the youngest?

(Answers: Texas has the most farms and Alaska the fewest. In Nebraska, Iowa, and North and South Dakota, 90 percent or more of the land area is farmland. Arkansas is number one in broilers and rice, North Carolina in turkeys and tobacco, North Dakota in barley and sunflowers, and Massachusetts in cranberries. West Virginia's farmers are oldest, on average, and Alaska's are the youngest.

U.S.-State Agricultural Data *by Letricia Womack, Larry Traub, and Mary Rivers. (Published August 1986; 103 pages of state data; GPO Stock No. 001-019-00479-7; $4.75.)*

1985's Production Costs

The costs of producing crops and livestock declined last year, and capital replacement costs (investment in buildings and machinery) also fell below 1984's level.

However, earnings were down for most crop farmers as lower commodity prices more than offset the reduced costs. Growers of oats and barley saw their worst net returns in nearly a decade. Some livestock and milk producers registered modest gains, while others faced lower net returns.

This statistical report, part of an annual series tracking key economic indicators in farming, provides detailed estimates of cash expenses, cash receipts, capital replacement costs, and net returns for 1983-85.

It covers the following commodities: corn, sorghum, barley, oats, wheat (all major classes), rice, soybeans, sunflowers, peanuts, flax, cotton, sugar beets, sugarcane, fed cattle, cow-calf operations, feeder pigs, farrow-to-finish hogs, sheep, and milk.

Economic Indicators of the Farm Sector: Costs of Production, 1985 *prepared by Bob McElroy, Annette Clauson, and Jim Johnson. (Published August 1986; 153 pages, mostly data tables; GPO Stock No. 701-015-00007-0; $5.00.)*

Farm Machinery Figures

This bulletin presents data on U.S. machinery production, manufacturers' shipments, inventory measures, price indices, farm expenditures for purchases and repairs, and on-farm machinery inventories. Detailed tables also cover U.S. imports and exports by type of machinery and the annual value of trade to and from individual countries.

Selected Farm Machinery Statistics *by Michael Hanthorn and Carlos Sisco. (Published July 1986; 54 pages, mostly data tables; GPO Stock No. 001-019-00475-4; $2.75.)*

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Why Labor Gets More of the Food Dollar Than Farmers

Butchers, bakers, grocery clerks, waiters . . . in 1985, an estimated 34 cents of every dollar Americans spent on domestically produced farm foods went to compensate the millions of workers who process, handle, and distribute food after it leaves the farm. With an additional 41 cents going to pay other marketing costs, about 25 cents per dollar went back to farmers.

The cost of labor to transform farm commodities into consumer-ready foods is taking an increasing share of food expenditures, while the share going back to food producers is declining. The explanation, according to analysts, involves farm price trends, wage rates and employment in the food industries, and changing consumption habits.

Economist Denis Dunham of USDA's Economic Research Service reports that consumers spent around $344 billion last year for foods that originated on U.S. farms. His figures exclude purchases of imported foods, fish, and other items not produced on American farms.

Of the $344 billion, around $86 billion—25 percent—represented the farm value of the food purchased. A larger amount, $117 billion or 34 percent, went to pay the wages, salaries, tips, and benefits of workers in the food marketing system.

The remaining $140 billion—41 percent of total food expenditures—covered other marketing expenses, such as costs of packaging materials, transportation, fuel and electricity, advertising, property taxes, and insurance. This also included $17 billion in corporate profits (before taxes) to food processors, wholesalers, and retailers.

As a share of total consumer spending on domestic farm foods, these "other marketing expenses" have fluctuated in a fairly narrow range of 37-41 percent since 1975. Labor costs and farm value, however, have shown distinct trends in opposite directions.

Back in 1975, 33 percent of food expenditures went to farmers, and 29 percent paid the marketing sector's labor bill. By 1980, the shares were even at 31 percent each. In the next 5 years, the farm value share dropped another 6 percentage points, and the labor share gained 3 points.

Why Farm Value Fell Behind

In dollar terms, the amount of money going back to farmers from consumer food expenditures increased by almost $31 billion—55 percent—between 1975 and 1985. At the same time, though, total food spending more than doubled from $167 billion to $344 billion, and the labor bill escalated by 142 percent. The farm share simply didn't keep up.

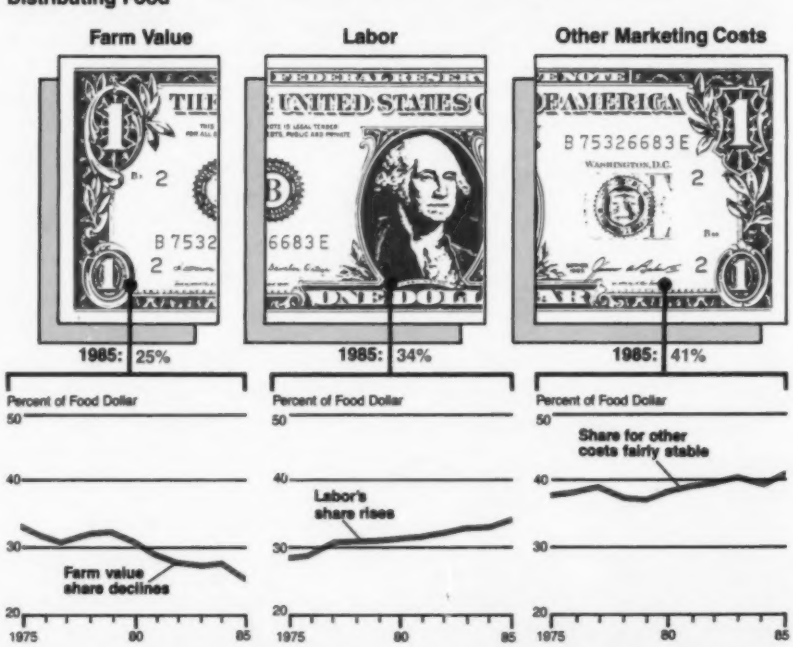
There are several reasons for the expansion in labor's share and the decline in the farm value share, according to Dunham.

Abundant supplies and steady-to-weak farm prices throughout much of this period held down increases in the food dollars going to farmers. In fact, from 1984 to 1985, the farm value actually dropped from $91 billion to $86 billion because of lower prices for farm products.

In contrast, wages and benefits for food industry employees rose steadily and fairly rapidly, particularly in the late 1970's and early 1980's. The higher labor costs usually were passed on to consumers, boosting the consumer food bill and gradually increasing labor's share of it.

The food industries also added significantly to their overall employment. Growth was concentrated primarily in food distribution, reflecting vigorous expansion in the fast food and restaurant sectors as well as the greater labor requirements of supermarkets. In response to changing lifestyles, tougher competition for the food dollar, and consumer demand for improved shopping convenience, many supermarkets have extended their hours, opened more check-

The Percentage of the Food Dollar Going Back to Farmers Declines, While a Growing Share Goes to Pay the Labor Bill for Processing, Handling, and Distributing Food



1985 preliminary. Data are for domestically produced farm foods purchased both in food stores and away-from-home eating places.

The more that food is transformed, prepared, or specially packaged after it leaves the farm, the greater the added costs, including labor costs, as the food moves through the marketing chain.

out counters, and added specialized sections, such as bakeries and delicatessens. All these services require extra employees.

In 1985, a total of around 11 million people were employed in food processing and distribution, compared with about 8 million in 1975, Dunham says.

Changing Consumption Habits

Employment growth and higher labor costs in the food industries have been encouraged by consumption trends that are changing the way the food dollar is divided.

Consumers are eating a larger percentage of their meals outside the home, and they are buying foods for the home that are quicker and easier to prepare. As the labor required to prepare foods is shifted from the consumer to someone in the food marketing system, more "value" is added to food between the farmer and the consumer.

Americans spent about 43 percent of their food dollars on away-from-home meals and snacks in 1985, compared with 36 percent just 10 years earlier. Because restaurant-goers are paying for the services of cooks, waiters, and dishwashers, the check is bigger and a smaller portion goes back to farmers compared with food purchased in supermarkets. As consumers devote an increasing percentage of their food budgets to away-from-home eating, the farm share of food spending declines, and the labor share tends to rise.

Another important reason why the farm share has dropped is strong consumer demand for heavily processed foods to match fast-paced, two-income, smaller family lifestyles. In general, the more that food is transformed, portioned, cooked, deboned, nutritionally supplemented, or specially packaged after it leaves the farm, the greater the added costs, including labor costs, as the food moves through the marketing chain. When those costs are passed on to consumers, the farm share of the total price goes down.

Does all this imply further shrinkage in the farm share over the years ahead? Dunham says it probably does, but he is quick to note that the decline may be much more gradual than it has been so far in the 1980's.

"Restrained wage and price inflation will moderate the cost of marketing foods after they leave the farm," he explains. "We also expect slower growth in food service sales as restaurants face tougher competition from supermarkets offering soup-and-salad bars, made-to-order sandwiches, and hot, ready-to-eat foods. Finally, production adjustments in agriculture are likely to reduce the surpluses that have depressed commodity prices."

According to Dunham, all these factors will temper further declines in the farm share over the next few years. "The farm share has dropped so rapidly in the recent past that it may even stabilize for a while," he says. □

[Based on information provided by economist Denis Dunham of the National Economics Division, Economic Research Service.]

Labor's Growing Share of Consumer Food Expenditures Partly Reflects Rising Earnings in Food Industries and Increasing Employment in Food Stores and Eating Places

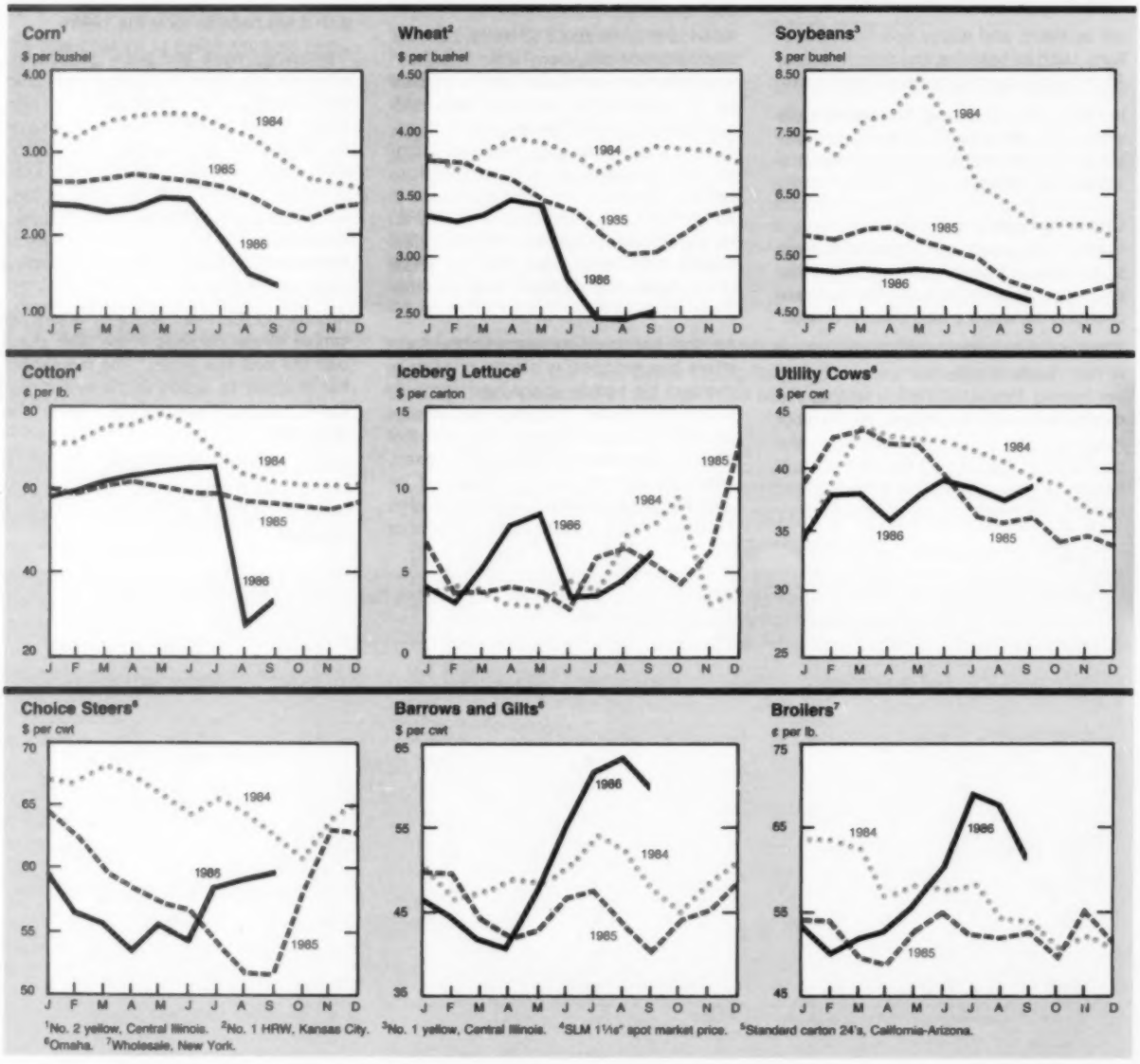
	Manufacturing of food and kindred products		Wholesale trade in groceries and related products		Food stores		Eating and drinking places	
	Average hourly earnings[1]	Employment, in thousands	Average hourly earnings[1]	Employment, in thousands	Average hourly earnings[1]	Employment, in thousands	Average hourly earnings[1]	Employment, in thousands
1975	$4.61	1,658	$4.59	587	$4.08	2,007	$2.55	3,380
1977	$5.37	1,711	$5.43	612	$4.77	2,106	$2.93	3,949
1979	$6.27	1,732	$6.39	648	$5.67	2,297	$3.45	4,513
1981	$7.44	1,671	$7.57	668	$6.85	2,448	$3.95	4,750
1983	$8.19	1,622	$8.70	685	$7.51	2,560	$4.27	5,007
1985	$8.54	1,636	$9.43	744	$7.36	2,827	$4.36	5,692

Source: *Employment and Earnings*, U.S. Department of Labor.
[1]Average earnings of production and nonsupervisory employees only.

FARMLINE TRENDS

Monthly Price Monitor

USDA's September index of farm prices declined 2.4% from August but was 1.7% above its year-earlier level. Corn slumped to $1.35 per bushel, almost $1 below its year-earlier price. Wheat, at $2.53, was up 5¢ from August but down more than 50¢ from a year earlier. Soybeans dropped 18¢ in September to $4.77. Cotton averaged 33.6¢ per lb., up nearly 7¢ from August but nowhere near prices of recent years. In the meat animals area, utility cows rose 90¢ to $38.52 per cwt, while choice steers increased slightly to $59.40. Although barrows and gilts dropped in price, September's $59.76 was $19 above the year-earlier level. Broilers, at a still-strong 61¢ a lb., were down about 7¢ from August. All prices shown are monthly averages.



[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1⅛" spot market price. [5]Standard carton 24's, California-Arizona. [6]Omaha. [7]Wholesale, New York.

Costs of Production and Returns for 1985[1]

Costs of production for crops and livestock declined last year. Because of lower crop prices, however, net returns deteriorated for several commodities, including corn, sorghum, wheat, soybeans, and cotton. Net returns (cash receipts minus cash expenses and replacement costs[2]) dropped to a U.S. average of 18¢ a bushel for corn and 85¢ for soybeans. Wheat returns moved into the negative range, and sorghum returns remained negative. Net returns to fed cattle slipped from a U.S. average of −$2.62 per cwt in 1984 to −$5.26 in 1985. Cow-calf and farrow-to-finish hog returns remained negative—but not as deeply so as in either of the previous 2 years. Hogs offered a $4-per-cwt return above cash expenses, if replacement costs were ignored. Milk returns last year were positive and were up slightly from 1984.

	Corn (dollars per bushel)			Grain sorghum (dollars per bushel)			Wheat (dollars per bushel)		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
Cash expenses	2.54	1.96	1.75	2.21	1.91	1.56	2.49	2.72	2.72
Cash expenses plus replacement costs[2]	2.97	2.28	2.04	2.79	2.41	1.97	3.06	3.34	3.33
Cash receipts minus cash expenses	.67	.62	.47	.63	.43	.34	1.11	.78	.34
Cash receipts minus cash expenses and replacement costs	.24	.30	.18	.06	−.06	−.07	.54	.17	−.28

	Soybeans (dollars per bushel)			Cotton (cents per pound)			Fed cattle (dollars per cwt)		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
Cash expenses	4.39	4.16	3.30	63.8	56.0	51.8	67.43	66.50	63.76
Cash expenses plus replacement costs[2]	5.34	5.04	4.01	73.3	64.2	59.3	68.64	67.57	64.78
Cash receipts minus cash expenses	3.56	1.89	1.56	16.4	9.8	9.0	−5.31	−1.55	−4.24
Cash receipts minus cash expenses and replacement costs	2.61	1.02	.85	6.8	1.6	1.5	−6.52	−2.62	−5.26

	Cow-calf (dollars per cow)			Hogs, farrow to finish (dollars per cwt)			Dairy (dollars per cwt of milk)		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
Cash expenses	268.80	276.53	266.87	46.42	46.93	40.22	10.39	10.64	9.74
Cash expenses plus replacement costs[2]	333.08	340.99	330.47	52.61	52.61	45.83	11.97	12.20	11.20
Cash receipts minus cash expenses	−21.62	−17.75	−12.48	.50	1.21	4.00	4.20	3.81	3.90
Cash receipts minus cash expenses and replacement costs	−85.90	−82.21	−76.08	−5.69	−4.47	−1.61	2.62	2.25	2.44

[1]All figures are U.S. averages. [2]Replacement costs are estimated charges to allow for replacement of capital invested in buildings and machinery.

Data were provided by economist Bob McElroy based on the latest costs of production report just published by the Economic Research Service. For information on ordering the complete report, see this month's *Reports in the News* section.

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